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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/998,919 | 12/03/2001 | Jerome Maillot | 1252.1056 | 4265 |

21171 7590 08/22/2006

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| EXAMINER |
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SAJOUS, WESNER

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| ART UNIT | PAPER NUMBER |
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2628

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/998,919 | MAILLOT ET AL. | |
| | Examiner | Art Unit | |
| | Sajous Wesner | 2628 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22-25 and 28-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 14-19, 22-25 and 28-41 is/are allowed.
- 6) ☒ Claim(s) 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is responsive to the amendment filed on 6/30/06. Claims 1-19, 22-25, 28-41 are presented for examination.

Response to Arguments

1. Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanrahan et al. (Direct WYSIWYG Painting and Texturing on 3D Shapes" Computer graphics, Vol. 24, No. 4, August 1990, pp. 215-223); or in the alternative as being unpatentable in view of Hanrahan in view of Kuklin et al., Derwent-Acc-No: 1997-019359.

Considering claim 1, Hanrahan discloses most claimed features of the invention as set forth in the previous office action (dated 4/3/06) including a method for selecting an area of a displayed parametric object living in three dimensional; and painting a brush texture map of a brush directly onto a surface of the area of the displayed

parametric object in the three dimensional space based on brush orientations (e.g., allowing a user to directly paint onto 3D shapes using a brush by applying paint to the shape of an object being painted on the surface of the object, (see paragraph 4 of page 216)), wherein the brush orientations minimize a distortion of a painted texture when displayed (e.g., when applying the brush directly onto the texture maps on 3D space). See abstract and paragraph 3 of col. 2 of pages 215 & 221 and to provide a real-time display or natural representation of the brush (see page 219 starting with section 2 starting @ page 218). Hanrahan fails to specifically disclose that the brush is volumetric.

However, it is noted that since the paint brush in Hanrahan is a tangent-space brush that when mapped onto a surface can act as a 3D brush or matte to control where the wash is applied (see last 3 paragraphs of section 3 beginning at page 219 and ending at page 220), it is obvious that the brush in Hanrahan represents a volumetric-type brush. For when the tangent brush is mapped onto a surface, it contemplates the size, shape or extent of the 3D object or region of a space. Therefore, the ordinary skilled in the art at the time the invention was made would have been motivated to modify Hanrahan to include a volumetric brush; in order to allow a user to directly apply the brush onto a 3D surface or region with a defined depth.

Kuklin, in the alternative, teaches the well-known concept of using a volumetric brush (or stamp). See the Abstract or Title section of Kuklin. Therefore, the ordinary skilled in the art at the time the invention was made would have been motivated to

modify Hanrahan to include a volumetric brush, in order to avoid distortion during removal from the brush (or stamp). See Advantage section of Kuklin's reference.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanrahan et al. ("Direct WYSIWYG Painting and Texturing on 3D Shapes" Computer Graphics, Vol. 24, No. 4, August 1990, pp. 215-223), and/or Hanrahan in view of Kuklin, as applied to claim 12 above, and further in view of Gueret (US RE38755).

Regarding claim 13, Hanrahan and Kuklin fail to teach a cylindrical brush having a defined depth.

Gueret discloses a cylindrical brush having a defined depth. See abstract and col. 3, lines 51-63.

Therefore, it would have been obvious to one of ordinary skill in the art at time of invention to utilize the teaching of Hanrahan in the same conventional manner as taught by Gueret; in order to provide a brush which is simple and economic to make and convenient to use. See Gueret's col. 2, lines 1-3.

Allowable Subject Matter

5. Claims 1-11, 14-19, 22-25, and 28-41 are allowed over the prior art.

The following is a statement of reasons for the indication of allowable subject matter:

Hanrahan discloses an analogous art including allowing a user to perform smearing when directly manipulate the parameters used to shade the surface of 3D shape using a paint brush, meaning that the object parameterization is continuous. However,

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Hanrahan fails to teach painting a brush texture map of a brush directly onto a texture map of a surface of the area of the displayed parametric object in 3D space based on brush orientations that minimize a distortion of a painted texture when displayed on the surface, wherein a parameterization of the object is discontinuous creating texture seams (as recited in claims 1, 22, 28, 31, 33-35, 37-41); and wherein an intensity of the brush varies based on a normal vector of the geometry affected by the brush on respective portions of the surface (as recited in claims 14); and wherein the painting stops beyond a portion of the surface with a normal vector which varies more than a predetermined angle from an intersection point normal (as recited in claim 15); wherein the painting stops beyond a portion of the surface when a distance from a distance from the brush to the portion of the surface is greater than a predetermined threshold (as recited in claim 17). Further Hanrahan fails to disclose a similar method wherein the normal vector comprises a smooth geometrical normal field that depends on the polygons affected by the brush (as recited in claim 8 in conjunction with the other limitations recited in the claim).

Claim 29 is allowed over the prior art because the Applicant, by amendment, has incorporated allowable subject matter into rejected base claim.

Claim 36 is allowed over the prior art for at least the reasons indicated above with respect to claims 15-17 and 29.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brimmead (US 6348924) discloses a method for interactively painting volumetric particles using a brush stroke.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

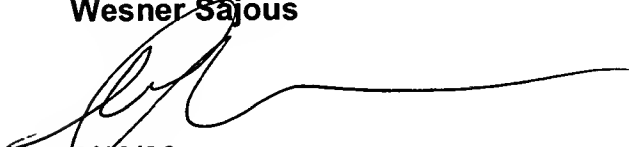
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajous Wesner whose telephone number is 571-272-7791. The examiner can normally be reached on Mondays thru Fridays between 10:30 and 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wesner Sajous



8/10/06